

REMARKS

Applicant concurrently files herewith a petition and fee for a one-month extension of time.

Claims 1 and 4-6 are all the claims presently being examined in the application.

Claim 1 has been amended, and claims 2-3 and 7-8 have been canceled.

Claims 1-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over NAGAHAMA, et al. (U.S. Patent Application Publication No. US 2005/0121679 A1).

While Applicant completely disagrees with the Examiner's rejections, claims 2-3 have been canceled and claim 1 has been amended, thereby to render moot the rejections, and pass all of the claims to allowance. No new matter has been added.

A feature of the claimed invention is in that the crack-preventing layer has a low dopant concentration of within a range of $5 \times 10^{16} \text{ cm}^{-3}$ to $5 \times 10^{17} \text{ cm}^{-3}$.

The Examiner asserts that NAGAHAMA, et al., teaches that the concentration of dopants may be in a range of $1 \times 10^{17} \text{ cm}^{-3}$ to $1 \times 10^{21} \text{ cm}^{-3}$. However, NAGAHAMA, et al., merely discloses this range of the dopant concentration in connection with the contact layer, not with a crack-preventing layer.

An important point is that low dopant concentration is not adopted by one of ordinary skill in the art, because a decrease of the dopant concentration causes an increased resistance of the crack-preventing layer. Accordingly, it is natural for one of ordinary skill in the art to select a higher dopant concentration for avoiding such a disadvantage (see Page 6, lines 22-26, of the present specification).

In this regard, NAGAHAMA, et al., teaches (and the Examiner admits on Page 3 of the Office Action) that the concentration of dopants is preferably in a range of $1 \times 10^{18} \text{ cm}^{-3}$ to $1 \times 10^{19} \text{ cm}^{-3}$, to keep down series resistance as well as leakage current.

The inventor of the present invention selected the range of the dopant concentration for the purpose of preventing cracks. The features of the present invention of “the crack-preventing layer having a low dopant concentration” is neither disclosed or suggested in the references, alone or in combination.

It is noted that any claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability.

Further, it is noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1 and 4-6, all the claims presently being examined in the application, are patentably distinct over the prior art of record and are in condition for allowance. Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiencies in fees or to credit
any overpayment of fees to Attorney's Deposit Account No. 50-0481.

Respectfully submitted,



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